Rate-coefficients and polarization results for the electron-impact excitation of $\text{Ar}^+$ ion$^1$ RAJESH SRIVASTAVA, DIPTI DIPTI, Indian Institute of Technology (I.I.T.) Roorkee, India — A fully relativistic distorted wave theory has been employed to study the electron impact excitation in $\text{Ar}^+$ ion. Results have been obtained for the excitation cross-sections and rate-coefficients for the transitions from the ground state $3p^5$ ($J =3/2$) to fine-structure levels of excited states $3p^4 4s$, $3p^4 4p, 3p^4 5s$, $3p^4 5p$, $3p^4 3d$ and $3p^4 4d$. Polarization of the radiation following the excitation has been calculated using the obtained magnetic sub-level cross-sections. Comparison of the present rate-coefficients is also done with the previously reported theoretical results for some unresolved fine structure transitions.

$^1$Work is supported by DAE-BRNS Mumbai and CSIR, New Delhi.